

EXECUTIVE SUMMARY

Prepared September 13, 1999

Mine Name: <u>Ruby Violet Mine</u>	I.D. No.: <u>M/001/045</u>
Operator: <u>Gemstone Mining Incorporated</u>	County: <u>Beaver</u>
<u>599 North 800 West #1</u>	New/Existing: <u>Existing SMO Expanding to</u>
<u>P.O. Box 3413</u>	<u>LMO Status</u>
<u>Cedar City, Utah 84720</u>	Mineral Ownership: <u>BLM</u>
Telephone: <u>(435) 559-7751 Fax (435) 867-0321</u>	Surface Ownership: <u>BLM</u>
Contact Person: <u>Scott Wilkinson</u>	Lease No.(s): <u>UTU-72232</u>
Received Large Mine Plan: <u>2/8/99</u>	Permit Term: <u>Life of Mine</u>
Life of Mine: <u>12 + years</u>	Received Reclamation Plan: <u>2/8/99</u>

Legal Description: NW1/4 NW 1/4 and NE1/4 NW1/4 of Section 29, and NE1/4 Section 30, Township 29 South, Range 14 West, Beaver County, Utah

Mineral(s) to be Mined: Red Beryl Crystals

Acres to be Disturbed: 40 acres

Present Land Use: Mineral exploration, recreation, wildlife habitat, and livestock grazing.

Postmining Land Use: Grazing, wildlife habitat, and recreation

Variances from Reclamation Standards (Rule R647) Granted: Rule R647-4-111.7. A final slope angle of 51 degrees was approved as stable and compatible with the natural topography.

Soils and Geology

Soil Description: Existing soils are classified as sandy loam and sandy clay loam. They soils are relatively shallow (2-3 inches). Erosion potential is moderate.

pH: 8.0

Special Handling Problems: The operator has provided laboratory analysis of the soils which show they are suitable for reclamation and they do not exhibit any special handling problems (i.e. toxicity, high salts, etc.)

Geology Description: Southern Wah Wah Mountains have formations ranging from Cambrian quartzites to late Tertiary volcanics. Minerals found here include: molybdenum, tungsten, iron, alunite, kaolin, sulfur, mercury, uranium, and fluorite. The plan area is located in rhyolite and altered rhyolite, which is overlain by basalt. Topaz, bixbyite, and bixbite (red beryl) crystals are found in the rhyolites.

Hydrology

Ground Water Description: None encountered to at least 600 feet below the proposed pit bottoms, based on the depth of exploration holes.

Surface Water Description: Two small ephemeral drainages which will be impacted by mining, but will be reclaimed to original cross sections.

Water Monitoring Plan: none needed

Ecology

Vegetation Type(s); Dominant Species: Pinyon juniper

Percent Surrounding Vegetative Cover: 30-35%

Wildlife Concerns: None - no threatened or endangered animal species are known to occur on the mine site, although low numbers of bald eagles are known to be present during the winter months. Peregrine falcons migrate through in the fall and spring and occasionally fly over the mine site. Other species of concern in the general area include the ferruginous hawk and burrowing owl. Mule deer are year-long residents of the Wah Wah Mountains and a few occur in the vicinity of the mine site. Pronghorn are year-long residents in low numbers.

Surface Facilities: A processing plant will be constructed on site to crush the ore and extract the red beryl.

Mining and Reclamation Plan Summary:

During Operations: Operator will reactivate and expand two existing open pit areas and associated waste dumps; establish a processing/sorting plant adjacent to the mine site. Salvageable plant growth medium within all areas to be disturbed will be stripped and stockpiled for reclamation. Overburden rock will be removed by use of a hydraulic excavator/track hoe. Drilling and blasting will be used as needed to lightly fracture and loosen in-place material that is too competent to remove with an excavator. The ore will be hauled directly to the mine site processing plant, located about 0.25 miles from the mine. At the processing plant, the ore will be crushed, sized, washed and conveyed over slow moving conveyor belts for visual inspection and sorting for the red beryl crystals. No chemicals will be used in the processing plant, except for a flocculent to accelerate settling of clay particles and allow recycling of the process wash water. No process water will be released from the processing site. No hazardous materials will be used or generated at the mine or processing plant site.

Water for plant processing, sanitary use, and dust control will be conveyed by a buried plastic pipeline from a company drilled well. Waste rock/overburden will be disposed of in a valley-fill waste dump and as backfill into one of the mined out pits. Reject material from the processing plant will be hauled back to the waste dump for disposal. Noxious weeds will be controlled.

After Operations: Reclamation of waste dumps and pit area will be accomplished by compaction and regrading of the loose waste material to slopes not exceeding 21 degrees. Remaining pit highwalls will be benched to not greater than 51 degree slopes, and the benched areas hydro-seeded. Topsoil will be placed at a depth of six inches. Areas not receiving topsoil will be amended with 20 tons/acre of composted manure. Erosion control structures will be created on the recontoured areas. All areas will be seeded with an approved seed mix.

Page 3
Executive Summary
M/001/045
September 13, 1999

The light colored pit highwalls, that are visible from a distance, will be treated with a commercially available rock colorant/dye to blend in with the surrounding environment.

Reclamation of the processing plant site will involve demolition and/or removal of all surface structures and facilities. Concrete building foundations will be broken up and buried on site. All disturbed areas will be re-contoured to a slope not to exceed 21 degrees, topsoiled and hydro-seeded.

Surety

Amount: \$243,200.00
Form: Letter of Credit
Renewable Term: 5 years (2004 dollars)

jb
M01-45.exc

ml/001/045

5 YEAR RECLAMATION BONDING CALCULATIONS FOR RUBY VOLET MINE, WASTE ROCK, NEW PLANT SITES AND ROADS

Item/Description	Quantity	Units	Unit Costs in \$	Total Cost in \$
Reclaim the Mine Areas				
Rough Grade/Contour Mine Areas	13.3	acres	500	6650
Reduce Visual Impact	3	acres	1500	4500
Replace Growth Media	10.3	acres	1500	15450
Revegetate	13.3	acres	1700	22610
Subtotal	13.3	acres		49210
Reclaim Waste Rock Area				
Rough Grade/Contour Areas	17.2	acres	500	8600
Erosion Control Structures	17.2	acres	500	8600
Replace Growth Media	17.2	acres	1500	25800
Revegetate	17.2	acres	1700	29240
Subtotal	17.2	acres		72240
Reclaim New Plant Site				
Remove Equipment/Structures	1	Lump Sum	5000	5000
Remove Concrete	35.2	Cubic Yards	50	1760
Rough Grade	8.9	acres	500	4450
Spread Waste Rock	8.9	acres	1500	13350
Replace Topsoil Material	8.9	acres	1500	13350
Revegetate	8.9	acres	1700	15130
Subtotal	8.9	acres		53040
Reclaim Roadways				
Remove Culverts	2	each	200	400
Rough Grade	0.99	acres	500	495
Replace Topsoil Material	0.99	acres	1500	1485
Erosion Control	0.99	acres	1500	1485
Revegetate	0.99	acres	1700	1683
Subtotal	0.99	acres		5548
Total for all sites	40.39	acres		180038
Supervision 5%				9001.9
Contingency 10%				18003.8
Subtotal				207043.7
5-years Escalation @ 3.27% Per Year				36139.13
TOTAL				243182.83